

### Amendment to the Claims

Kindly amend claims 1, 4 and 7, as set forth below. In compliance with the Revised Amendment Format published in the Official Gazette on February 25, 2003, a complete listing of claims is provided herein. The changes in the amended claims are shown by strikethrough (for deleted matter) and underlining (for added matter).

1. (Currently Amended) A method of managing the locking of resources of a data repository, said method comprising:

~~determining a relationship between a plurality of resources of said data repository, wherein said relationship is at least one of a containment-based relationship and a reference-based relationship; and~~

~~locking at least one resource of said plurality of resources based on said relationship~~ determining whether a relationship between one resource and another resource of a data repository is a containment-based relationship or whether the relationship is a reference-based relationship, wherein the data repository comprises a hierarchical structure of a plurality of resources, said hierarchical structure comprising one or more resources having a reference-based relationship and one or more resources having a containment-based relationship; and

locking at least one resource of said plurality of resources using a locking strategy that depends on whether the determined relationship is a containment-based relationship or a reference-based relationship.

2. (Original) The method of claim 1, wherein said locking of said at least one resource is performed without locking at least one other resource of said plurality of resources.

3. (Original) The method of claim 1, wherein said locking of said at least one resource is further based on an operation to be performed.

4. (Currently Amended) A system of managing the locking of resources of a data repository, said system comprising:

~~means for determining a relationship between a plurality of resources of said data repository, wherein said relationship is at least one of a containment-based relationship and a reference-based relationship; and~~

~~means for locking at least one resource of said plurality of resources based on said relationship~~ means for determining whether a relationship between one resource and another resource of a data repository is a containment-based relationship or whether the relationship is a reference-based relationship, wherein the data repository comprises a hierarchical structure of a plurality of resources, said hierarchical structure comprising one or more resources having a reference-based relationship and one or more resources having a containment-based relationship; and

means for locking at least one resource of said plurality of resources using a locking strategy that depends on whether the determined relationship is a containment-based relationship or a reference-based relationship.

5. (Original) The system of claim 4, wherein said means for locking comprises means for locking said at least one resource without locking at least one other resource of said plurality of resources.

6. (Original) The system of claim 4, wherein said means for locking further comprises means for locking said at least one resource based on an operation to be performed.

7. (Currently Amended) At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method of managing the locking of resources of a data repository, said method comprising:

~~determining a relationship between a plurality of resources of said data repository, wherein said relationship is at least one of a containment-based relationship and a reference-based relationship; and~~

~~locking at least one resource of said plurality of resources based on said relationship~~ determining whether a relationship between one resource and another resource of a data repository is a containment-based relationship or whether the

relationship is a reference-based relationship, wherein the data repository comprises a hierarchical structure of a plurality of resources, said hierarchical structure comprising one or more resources having a reference-based relationship and one or more resources having a containment-based relationship; and

locking at least one resource of said plurality of resources using a locking strategy that depends on whether the determined relationship is a containment-based relationship or a reference-based relationship.

8. (Original) The at least one program storage device of claim 7, wherein said locking of said at least one resource is performed without locking at least one other resource of said plurality of resources.

9. (Original) The at least one program storage device of claim 7, wherein said locking of said at least one resource is further based on an operation to be performed.

10. (Previously Presented) The method of claim 3, wherein the operation comprises at least one of create, delete, read and write.

11. (Previously Presented) The method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource in order to create an instance of the second resource.

12. (Previously Presented) The method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource and the second resource in order to delete an instance of the second resource.

13. (Previously Presented) The method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises read locking the second resource in order to read therefrom.

14. (Previously Presented) The method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the second resource in order to write thereto.

15. (Previously Presented) The method of claim 10, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource in order to delete the first resource.

16. (Previously Presented) The method of claim 10, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource in order to create an instance of the second resource.

17. (Previously Presented) The method of claim 10, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource, and wherein the locking comprises write locking the at least one of the at least one instance of the first resource in order to delete the second resource.

18. (Previously Presented) The method of claim 10, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises read locking the first resource and the second resource in order to read the second resource.

19. (Previously Presented) The method of claim 10, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource, and wherein the locking comprises read locking at least one of the at least one instance of the first resource and write locking the second resource in order to write to the second resource.

20. (Previously Presented) The method of claim 10, wherein the relationship is a referenced-based relationship, wherein the at least one resource comprises a first resource, a second resource and a third resource, the first resource and the second resource referencing the third resource, and wherein the locking comprises read locking one of the first resource and the second resource and write locking the third resource in order to write to the third resource.

21. (Previously Presented) The method of claim 1, wherein the determining comprises employing a set of policies.

22. (Previously Presented) The method of claim 1, wherein the at least one resource comprises at least one of a table and a directory.

23. (Previously Presented) The system of claim 4, wherein the operation comprises at least one of create, delete, read and write.

24. (Previously Presented) The system of claim 23, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the means for locking comprises means for write locking the first resource in order to create an instance of the second resource.

25. (Previously Presented) The system of claim 23, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the means for locking comprises means for write locking the first resource and the second resource in order to delete an instance of the second resource.

26. (Previously Presented) The system of claim 23, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the means for locking comprises means for read locking the second resource in order to read therefrom.

27. (Previously Presented) The system of claim 23, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the means for locking comprises means for write locking the second resource in order to write thereto.

28. (Previously Presented) The system of claim 23, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the means for locking comprises means for write locking the first resource in order to delete the first resource.

29. (Previously Presented) The system of claim 23, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the means for locking comprises means for write locking the first resource in order to create an instance of the second resource.

30. (Previously Presented) The system of claim 23, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource, and wherein the means for locking comprises means for write locking the at least one of the at least one instance of the first resource in order to delete the second resource.

31. (Previously Presented) The system of claim 23, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the means for locking comprises means for read locking the first resource and the second resource in order to read the second resource.

32. (Previously Presented) The system of claim 23, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource, and wherein the means for locking comprises means for read

locking at least one of the at least one instance of the first resource and write locking the second resource in order to write to the second resource.

33. (Previously Presented) The system of claim 23, wherein the relationship is a referenced-based relationship, wherein the at least one resource comprises a first resource, a second resource and a third resource, the first resource and the second resource referencing the third resource, and wherein the means for locking comprises means for read locking one of the first resource and the second resource and write locking the third resource in order to write to the third resource.

34. (Previously Presented) The system of claim 4, wherein the means for determining comprises means for employing a set of policies.

35. (Previously Presented) The system of claim 4, wherein the at least one resource comprises at least one of a table and a directory.

36. (Previously Presented) The at least one program storage device of claim 7, wherein the operation comprises at least one of create, delete, read and write.

37. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource in order to create an instance of the second resource.

38. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource and the second resource in order to delete an instance of the second resource.

39. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second

resource, and wherein the locking comprises read locking the second resource in order to read therefrom.

40. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the second resource in order to write thereto.

41. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource in order to delete the first resource.

42. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises write locking the first resource in order to create an instance of the second resource.

43. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource, and wherein the locking comprises write locking the at least one of the at least one instance of the first resource in order to delete the second resource.

44. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource, and wherein the locking comprises read locking the first resource and the second resource in order to read the second resource.



45. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a reference-based relationship, wherein the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource, and wherein the locking comprises read locking at least one of the at least one instance of the first resource and write locking the second resource in order to write to the second resource.

46. (Previously Presented) The at least one program storage device of claim 36, wherein the relationship is a referenced-based relationship, wherein the at least one resource comprises a first resource, a second resource and a third resource, the first resource and the second resource referencing the third resource, and wherein the locking comprises read locking one of the first resource and the second resource and write locking the third resource in order to write to the third resource.

47. (Previously Presented) The at least one program storage device of claim 7, wherein the determining comprises employing a set of policies.

48. (Previously Presented) The at least one program storage device of claim 7, wherein the at least one resource comprises at least one of a table and a directory.

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